U.S. Department of the Interior
Bureau of Land Management

Environmental Assessment NV-045-08-024

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PROPOSED INSTALLATION, OF THE MEADOW VALLEY 3 WILDLIFE WATER DEVELOPMENT LINCOLN COUNTY, NEVADA

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BLM

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Background Information

Introduction

The Nevada Department of Wildlife (NDOW) proposes to construct the Meadow Valley #3 (MV3) Wildlife Water Development in the southern portion of the Meadow Valley Range Wilderness area at approximately 3600 feet in elevation, which is in critical habitat for the desert tortoise (Mormon Mesa ACEC). This proposal replaces the previous MV3 proposal located on Sunflower Mountain (approximately 12 miles to the NE of this proposed site) because the vegetation surrounding the project site burned in the Meadow Valley fire in 2005. The current site under consideration is 2 miles northeast of the intersection of the Clark County line and old Hwy 93 (See Figure 1). The project would be constructed over the course of one day sometime between January and May 2009.

The Nevada Department of Wildlife (NDOW), in partnership with the Bureau of Land Management (BLM), have previously constructed wildlife water developments in the Mojave Desert to improve the distribution and subsequent use of habitat by wildlife species, in particular, desert bighorn sheep (*Ovis canadensis nelsoni*). The Meadow Valley Range was designated as wilderness by the Lincoln County Conservation, Recreation and Development Act of 2004 (LCCRDA; Public Law 108-424 November 30, 2004). Section 209 (d) in the Act specifically allows for construction of wildlife water developments in wilderness.

Purpose and Need

The purpose of the proposed action is to improve availability and distribution of dependable waters sources in habitat identified as water limiting for desert bighorn sheep. The water sources in the form of natural springs that are available are concentrated in one area and have been developed for livestock use (See Figure 1). The Meadow Valley Range encompasses 90,914 acres of occupied desert bighorn sheep habitat. The Nevada Department of Wildlife has determined that sufficient food and cover are provided, but population numbers are limited due to a lack of available water distributed throughout the range. A minimum tool analysis was completed.

MV-3 Overview

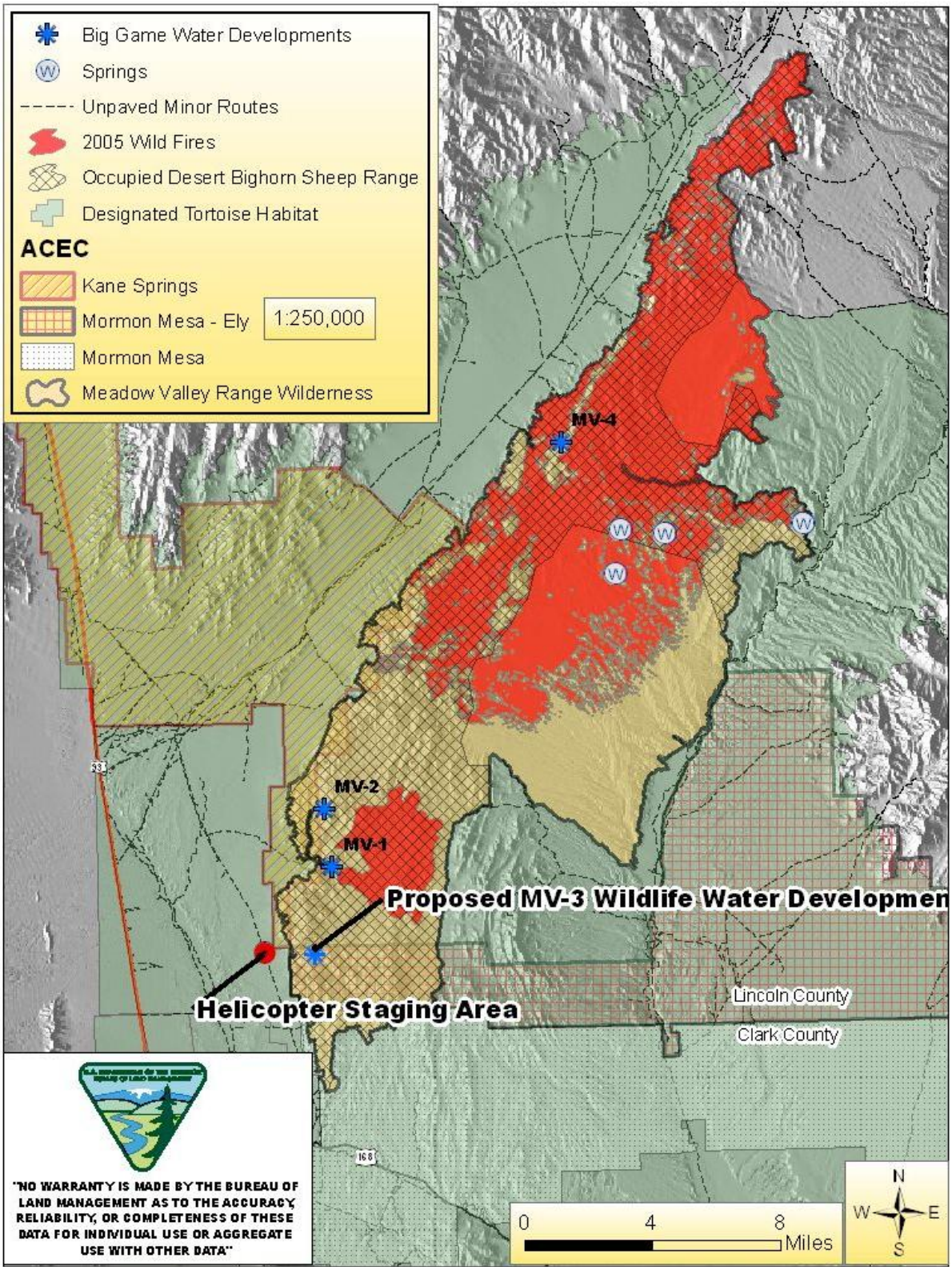


Figure 1. Overview map of proposed action including helicopter staging area.

Relationship to Planning

Conformance with BLM Land Use Plans

The proposed action and alternative action are in conformance with the goals, objectives, and decisions of the following BLM Land Use Plans:

- BLM Ely District Record of Decision and Approved Resource Management Plan (2008).

Compliance with Laws, Statutes, and Regulations

The proposed action and alternative action are in compliance with the following laws:

- The Wilderness Act of 1964 (16 U.S.C. §§ 1131-1136, September 3, 1964, as amended 1978).
- The Federal Land Policy and Management Act of 1976 (43 U.S.C. §§ 1701-1782, October 21, 1976, as amended 1978, 1984, 1986, 1988, 1990-1992, 1994 and 1996).
- The Lincoln County Conservation, Recreation and Development Act of 2004 (Public Law 108-424).
- The National Environmental Policy Act of 1969 (42 U.S.C. §§ 4321-4347, January 1, 1970, as amended 1975 and 1994).
- Management of Designated Wilderness Areas (43 CFR Part 6300).
- Executive Order 13443: Facilitation of Hunting Heritage and Wildlife Conservation (2007).

Relationship to Policies and Guidelines

The proposed action and alternative action are in conformance with the following guidelines and manuals:

- Wildlife Management Guidelines (House Report No. 101-405, Appendix B).
- Management of Designated Wilderness Areas (BLM Manual 8560).
- Memorandum of Understanding between the Bureau of Land Management and the Nevada Department of Wildlife, Wildlife Management in Nevada BLM Wilderness Areas (BLM MOU 6300-NV930-0402)
- Rangewide plan for managing habitat of desert bighorn sheep on public lands. U.S. Department of the Interior. Gov Doc I53.2: B48.
- Mountain Sheep Ecosystem Management Strategy in the 11 Western States and Alaska. Fish and Wildlife 2000 series.

Issues

Issues addressed in this EA were identified through internal and public scoping. Internal scoping was done via meetings and written communications with BLM resource specialists. Public scoping was conducted in the form of written letters, email, and phone calls. A public notice of intent was initially sent in June of 2005 and on December 8, 2008…. ? comments were received. Internal scoping was reinitiated on August 12, 2008. Major issues identified are as follows:

- Spread of noxious and non-native invasive weeds
- Hydrological impacts and water law compliance
- Consistency with Wilderness Management Plan
- Helicopter flights
- Number of people for construction
- Impacts to wilderness character

Description of the Proposed Action and No Action

Proposed Action

The proposed water development would consist of the following; a solid "slick rock" collection surface, a small check dam, two 2" polypipe lines to carry water to the tanks, four low profile 1,800 gallon tanks 28 inches tall by 8 feet wide and 16 feet long. The tanks would be placed side by side and leveled on a flat spot 17 feet by 32 feet (≈ .05 acres total). Work to level the surface would be accomplished using hand tools. The drinker would be placed 15-50 feet away from the tanks. The drinker would be constructed of ¼" plate steel and sunk into the ground with cement and rocks placed around it (See Appendix 3 for photos of site). The Nevada Department of Wildlife has proposed to use generators, power saws, drills, and cement mixers to complete construction.

The Nevada Department of Wildlife proposes to sling load construction materials to the water development site by helicopter two weeks prior to construction and to fly workers to the site the day of construction. The staging area for the helicopter flights is encompassed by the Mormon Mesa-Ely ACEC, however, the site is located directly on old Highway 93 approximately 0.7 miles north of the Clark County line; a previously disturbed location.

The project is proposed to take place between the months of January and May of 2009. Twenty five to forty individuals would assist in accomplishing the proposed action, construction would likely take approximately 6-8 hours to complete.

Future inspection and maintenance would occur by foot or pack stock.

Design Features

The following Standard Operating Procedures would be adhered to:

1. Regarding desert tortoise, the following Reasonable and Prudent Measures (RPMs) and Terms and Conditions (TCs) contained in the Programmatic Biological Opinion (84320-2008-F-0078) for the BLM Ely District Record of Decision and Approved Resource Management Plan (2008) will be followed: RPMs: 1-3 & 6, TCs: 1a, 2a-2e, 3a, 3e, & 6a. (See Appendix 1).

2. The proposed action would comply with the *Ely District Policy Management Actions for the Conservation of Migratory Birds* (Instruction Memorandum NV-040-2001-02).

3. A cultural survey of each treatment area would be conducted and appropriate site documentation completed prior to project implementation. National Register eligible cultural resources would be avoided or impacts would be mitigated as necessary before treatments are implemented (See Cultural Inventory Attachment).

4. The BLM Ely District Weed Management Standard Operating Procedures and

recommendations contained in the Weed Risk Assessment for the project would be followed (See Appendix 2).

5. A project inspector would be assigned to the project to insure it is constructed according to specifications. The project would be inspected and maintained annually by BLM and/or NDOW personnel, as well as volunteers. The sites would be checked for noxious weeds annually for at least three seasons, or until native vegetation has recovered enough to lessen the chance of infestation.

6. NDOW would reseed the disturbed areas using a BLM approved seed mix provided by BLM Ely District Office.

7. Removal of vegetation would be kept to the minimum necessary for construction. At the end of the project, NDOW would spread the remainder of the vegetation that was removed and place it along bare ground and disturbed areas to provide soil, shade, and cover.

8. Location sites shall be maintained in a sanitary condition at all times; litter shall be disposed of promptly at an authorized solid waste disposed site. Failure to remove litter may result in assessment of damages by the Authorized Officer, BLM. "Litter" means all discarded matter including but not limited to trash, garbage, refuse, ashes, and equipment. Site must be maintained and left in a clean and safe condition.

9. NDOW is responsible for clean-up and assumes liability for any and all releases of hazardous substances and or oil (more than one quart) disposed on public land as defined in the National Oil and Hazardous Substances Contingency Plan (40 CFR 300). NDOW will immediately notify the BLM Authorized Officer of any and all releases of hazardous substances and or oil (more than one quart) on public land.

10. Project area cleanup would be accomplished by removing all refuse to an approved sanitary landfill.

No Action

Under this alternative no wildlife water development would be constructed. Desert bighorn distribution and abundance would continue to be limited in the southern portion of the Meadow Valley Wilderness due to lack of water.

Other Action Alternatives

No other action alternatives were needed to address unresolved conflicts concerning alternative uses of available resources.

Alternatives Considered But Eliminated from Detailed Analysis

Sites outside of the Meadow Valley Range Wilderness were examined. However, most of the current and historic desert bighorn habitat was included within wilderness, consequently Bunker Hills, which is south of the wilderness boundary, was the only area that could be considered. Prior to wilderness designation, NDOW had identified the Bunker Hills as a significant cool

season use area. Unfortunately, this area has mineral development potential; therefore, the Bunker Hills area was dropped from consideration because of expected human disturbance to bighorn sheep.

Description of the Affected Environment and Environmental Consequences

Mandatory Items for Consideration

The following items displayed in Table 1 have been evaluated for the potential for significant impacts to occur, either directly, indirectly or cumulatively, due to implementation of the proposed action. Consideration of some of these items is to ensure compliance with laws, statutes or Executive Orders that impose certain requirements upon all Federal actions. Other items are relevant to the management of public lands in general, and to the Ely BLM in particular.

Rationales for those elements not analyzed are also listed in Table 1. These items will not be considered further in this document. The mandatory items that are considered in the EA are described and analyzed following Table 1 in the Affected Environment and Environmental Consequences section.

Table 1. Mandatory items for consideration.

Resource/Concern	Issue(s) Analyzed? (Y/N)	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Air Quality	N	**Proposed Action would not increase air pollutant concentrations for more than one day.**
Cultural Resources	N	**All ground disturbing activities will be subject to National Historic Preservation Act (1966) Section 106 review and, if needed, SHPO consultation as per BLM Nevada's implementation of the Protocol for cultural resources. All proposed activities and disturbances must avoid cultural resources. Prior to proposed ground disturbing activities, all project areas will be inventoried to identify possible cultural resources. If cultural resources are discovered, the proposed project will be moved to a distance of 100 meters or greater from the resources, thus avoiding impacts to cultural resources. Additionally, a cultural resources inventory needs assessment was completed and recommendations will be followed.**
Environmental Justice	N	**No minority or low-income groups would be affected by disproportionately high and adverse health or environmental effects.**

Resource/Concern	Issue(s) Analyzed? (Y/N)	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Fish and Wildlife	Y	**No fish present. Individual animals may be temporarily displaced during construction or a few ground-dwelling individuals may be permanently displaced.**
Floodplains	N	**Resource not present.**
Forest and Rangeland Health	N	**The Mojave/Southern Great Basin Resource Advisory Council sets the standards and guidelines for this resource. The proposed action does not conflict with this guidance.**
Grazing Uses	N	**It is highly unlikely that the proposed action would greatly decrease range productivity, diversity, or vigor. It may facilitate an increase in the number of desert bighorn on the landscape that could lead to minimal competition for available forage that overlaps the dietary requirements of these species.**
Invasive Non-native Plant Species	Y	**Construction activities may increase risk of noxious or non-native invasive species establishment. Mitigation measures in the weed risk assessment will be followed.**
Land Uses	N	**No changes in land use would occur.**
Migratory Birds	N	**Following the BLM interim management guidance for the Migratory Bird Treaty Act would prevent impacts.**
Mineral Resources	N	**No mine claims exist.**
Native American Religious Concerns	N	**There are no known issues of concern to local tribes.**
Paleontological Resources	N	**No known sites of high scientific value are known. The proposed action does not conflict with the BLM's Ely District Resource Management Plan (2008) regarding this resource.**
Recreation Uses	N	**Recreational use would not be limited by the proposed project.**
Special Designations other than Designated Wilderness	N	**Mitigation measures will minimize any impacts to the Mormon Mesa ACEC from construction.**

Resource/Concern	Issue(s) Analyzed? (Y/N)	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Special Status Animal Species (Federally protected, Nevada State protected, BLM Sensitive rated)	Y	**Following the Reasonable and Prudent Measures and associated Terms and Conditions as stated in the Programmatic Biological Opinion (84320-2008-F-0078) for the BLM's Ely District Resource Management Plan (2008) would minimize impacts from the proposed action to the federally listed desert tortoise. Other than desert bighorn sheep, no known State protected or Nevada BLM listed sensitive species (SS) reside within the area of influence of the construction site. Unknown SS individuals (ie. western chuckwalla) may be impacted by the proposed action.**
Special Status Plant Species (Federally protected, Nevada State protected, BLM sensitive rated)	N	**No special status plant species are known to exist in the project area.**
Vegetation/Soils/ Watershed	Y (Soils) N (vegetation &Watershed)	**Minimal disturbance (‹ .10 acre) is highly unlikely to negatively impact the overall vegetative resources at the proposed site. It would remove ≈ .05 acres of potential forage available to livestock and other grazing/browsing species. Soils would only be affected locally where excavation, pipeline placement, and grading for construction occur. Watershed characteristics would not be affected.**
Vegetative Resources (Forest or Seed Products)	N	**The Wilderness Act does not allow forest or seed products to be sold.**
VRM	N	**The proposed action is consistent with Visual Resource Management (VRM) Class I objectives for wilderness. The proposed action would not be visible from any road and the level of change to the landscape is low.**
Wastes, Hazardous or Solid	N	**No wastes are anticipated**
Water Quality, Drinking/Ground	N	**Proposed Action would not be in proximity to drinking or ground water.**
Water Resources (Water Rights)	N	**BLM is subject to State of Nevada water rights laws.**
Wetlands/Riparian Zones	N	**Resource does not exist.**

Resource/Concern	Issue(s) Analyzed? (Y/N)	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Wild Horses	N	**No Herd Management Units overlap the proposed site.**
Wilderness	Y	**Proposed action seeks to enhance wilderness character.**

Fish and Wildlife

Affected Environment

Wildlife species characteristic of the Mojave Desert, in particular, the Mojave mid-elevation mixed desert scrub ecological system, likely occur in proximity to the project site. Species may include cactus wren (*Campylorhynchus brunneicapillus*), prairie falcon (*Falco mexicanus*), desert night lizard (*Xantusia vigilis*), desert horned lizard (*Phrynosoma platyrhinos*), western banded gecko (*Coleonyx variegates*), and kit fox (*Vulpes macrotis*).

Environmental Consequences

Proposed Action
There may be some temporary disturbance to normal behavior and range use patterns of individual animals during construction of the wildlife water development. For instance, individuals that use ledges for cover may be displaced during construction. However, long-term impacts to range use patterns are not expected. Additionally, long-term impacts may be beneficial for animals that obtain water from the development.

No Action
Under the no action alternative this wildlife water development would not be built, therefore, no effects to wildlife would occur.

Invasive Non-Native Plant Species

Affected Environment

The Meadow Valley Range Wilderness area is located in the Mojave basin and range ecoregion (Mojave Desert). The proposed site is located within the Mojave Mid-Elevation Mixed Desert Scrub ecological system. Characteristic species include blackbrush (*Coleogyne ramosissima*), eastern Mojave buckwheat (*Eriogonum fasciculatum*), Moromon tea (*Ephedra nevadensis*), Mojave yucca (*Yucca schidigera*), and Joshua tree (*Yucca brevifolia*). Grass species may include Indian ricegrass (*Achnatherum hymenoides*), Sandberg bluegrass (*Poasecunda*), or big galleta (*Pleuraphis rigida*).

Noxious and non-native invasive weeds are frequent obstacles to land management in the Mojave basin and range ecoregion. Non-native invasive species are defined by Executive Order 13112 as “an alien species whose introduction does or is likely to cause economic or

environmental harm or harm to human health." Alien refers to a species that did not evolve in the environment in which it is found. Noxious weeds are any plant designated by a Federal, State, or County government as injurious to public health, agriculture, recreation, wildlife, or property. (Sheley, Petroff, and Borman 1999).

There are no known noxious weeds at the proposed site but non-native invasive annual grasses such as red brome (*Bromus rubens*) or cheatgrass (*Bromus tectorum*) may be present in the seed bank. Non-native invasive annual grasses alter natural fire regimes by increasing fire frequency and severity.

Environmental Consequences

Proposed Action
The ground disturbance created by construction activities may increase the risk of noxious or non-native invasive species establishment. New weed infestations such as red brome could spread to nearby areas further altering fire regimes. However, the BLM Ely District Weed Management Standard Operating Procedures (SOPs) and recommendations contained in the Weed Risk Assessment for the proposed action would be followed. These procedures should minimize the potential to spread noxious and non-native invasive weeds into the proposed location.

No Action
Any changes to the abundance or location of noxious and non-native invasive weeds related to this project would not occur.

Special Status Animal Species

Federally Listed Species

Affected Environment

The only federally listed species in the project area is the desert tortoise (*Gopherus agassizii*). The Mojave population (west & north of the Colorado River) of desert tortoise was listed by USFWS as threatened in 1990. This long-lived species inhabits creosote bush-burro bush (*Ambrosia dumosa*) or creosote bush-Joshua tree (*Yucca brevifolia*) vegetation types in the eastern Mojave Desert where they forage primarily on perennial grasses and forbs. Mating can occur anytime between March and October, after which this species goes into hibernation. It takes about 5 years before their shell hardens, thus they are extremely vulnerable to predation. Sexual maturity is reached between 10 and 15 years. The primary threats include habitat loss, livestock grazing, raven predation, and disease.

The proposed action is within the Mormon Mesa-Ely (MM-E) Area of Critical Environmental Concern (ACEC). ACECs were designated as a result of mandates from section 202(3)(c) of the Federal Land Policy and Management Act of 1976 (FLPMA) and refer to geographical areas within lands administered by the BLM that require special measures to protect sensitive cultural,

physical, or biological resource values. The MM-E ACEC was created primarily to protect critical habitat for the desert tortoise. Grazing permits within ACECs have been retired.

Environmental Consequences

Proposed Action
The MV3 site will be surveyed for desert tortoises according to established protocol prior to construction. If tortoise presence is found the development will be moved to a different location.

No Action
Under the no action alternative this wildlife water development would not be built, therefore, no effects to desert tortoise would occur.

BLM Sensitive Species

Affected Environment

In addition to species protected under the Endangered Species Act, Nevada BLM Special Status Species include wildlife and plants that are classified as protected under Nevada Revised Statute (N.R.S.) 501.110. Additionally, Nevada BLM includes Sensitive Species, which are defined as taxa that are not federally or State protected. It is BLM policy to provide the same level of protection for sensitive species as a federal candidate species (BLM Manual 6840.06). The manual states, *BLM shall implement management plans that conserve candidate species and their habitat and ensure that actions authorized, funded, or carried out do not contribute to the need for the species to become listed*.

The only known BLM special status animal species in the project area is the desert bighorn sheep (Listed as Nevada BLM sensitive). The desert bighorn sheep found in the project area is one of four desert subspecies of bighorn sheep (*Ovis canadensis*) found in North America. They prefer rough, rocky, and steep terrain; require freestanding water in the summer months or during drought; and mainly eat grasses, shrubs, and forbs (BLM 2008a). The Meadow Valley Range encompasses 90,914 acres of occupied bighorn habitat (See Figure 1).

Environmental Consequences

Proposed Action
The proposed action's intent is to benefit desert bighorn sheep by providing an additional water source in order to enhance the distribution and use of suitable desert bighorn sheep habitat in the Meadow Valley Range Wilderness. The site is located in terrain preferred by desert bighorn lamb and ewe groups most of the year, which provides sufficient food and cover, but limited water. This water project will provide long-term benefits to the sheep. Movement of individual animals may be hindered during the one day of construction and the day that materials are sling loaded to the construction site.

No Action
Under the no action alternative this wildlife water development would not be built, therefore, desert bighorn sheep in this area would continue to be restricted to their current distribution.

No disturbance to unknown individual special status species would occur.

Soils

Affected Environment

The soil management unit for the proposed action is NV-608. Entisols and Aridisols are the typical desert soils that occur at the proposed site. The soil type is categorized as the Rockland-St. Thomas Association, which occurs on steep slopes associated with foothills and mountain sides. The Rockland occurs in areas of limestone exposures and the St. Thomas soils consist of well-drained cobbly loam, which has moderately rapid permeability and very low water capacity, and the Weiser cobbly sandy loam, which is a deep and well-drained soil that forms on steeper (15 to 30 percent slope) alluvial fans. The permeability is moderately rapid, and the available water capacity is low to very low.

Environmental Consequences

Proposed Action
The proposed action would result less than 0.10 acre of permanent disturbance. This includes removal of vegetation and excavation for tank and drinker installation. Tank installation may cause minimal changes in drainage and erosion patterns at the site. Since the wildlife water development is located near a large drainage, the impacts to the surrounding soils are expected to be negligible. Excavated soils and vegetation would be redistributed at each site or used to create an uphill berm to minimize erosion potential.

No Action
Under the no action alternative, no effects to soils would occur.

Wilderness

Affected Environment

The Meadow Valley Range is boomerang-shaped, measuring approximately ten miles east to west, and arching about 36 miles from north to south. It consists of three major landforms: the long ridgeline of the Meadow Valley Mountains, a large bajada beginning high on the main ridge sloping easterly towards Meadow Valley Wash, and finally Bunker Hills five miles from the southern section of the central bajada. Fossils in the limestone hills give us snapshots of life hundreds of millions of years ago, when these high inland mountains were merely sediments accumulating at the bottom of the sea. The mountains themselves give a bird's-eye view of nature's erosional forces at work. The various climates and elevations in the area provide important habitat for wildlife. The low elevations provide habitat for the desert tortoise, the banded Gila monster (*Heloderma suspectum cinctum*), desert banded gecko (*Coleonyx variegatus variegates*), sidewinder (*Crotalus cerastes*) and long-nosed leopard lizard (*Gambelia wislizenii*). Higher in the mountains, it's possible to spot desert bighorn sheep, or possibly a mountain lion (*Felis concolor*). An impressive diversity of raptors lives in the area. Burrowing owl (*Athene cunicularia*), golden eagle (*Aquila chrysaetos*), ferruginous hawk (*Buteo regalis*),

prairie falcon (*Falco mexicanus*), Cooper's hawk (*Accipiter cooperii*), merlin (*Falco columbarius*), and American kestrel (*Falco sparverius*) are some of the birds of prey that have been spotted in the region.

Vegetation consists of low desert shrub with the exception of the northern section of the Meadow Valley Mountains, which is pinyon and juniper forest. Rare vegetation can include the white bearpoppy (*Arctomecon merriamii*) and Clark mountain agave (*Agave utahensis var. nevadensis*).

The United States Congress established the National Wilderness Preservation System to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States. Wilderness designation is intended to preserve and protect certain lands in their natural state. Only Congress, with Presidential approval, may designate public lands as Wilderness. The Wilderness Act of 1964 identifies wilderness uses and prohibited activities. Although wilderness character is a complex idea and is not explicitly defined in the Wilderness Act, wilderness characteristics are commonly described as:

- **Untrammeled** – area is unhindered and free from modern human control or manipulation.
- **Natural** – area appears to have been primarily affected by the forces of nature.
- **Undeveloped** – area is essentially without permanent improvements or human occupation and retains its primeval character.
- **Outstanding opportunities for solitude or a primitive and unconfined type of recreation** – area provides outstanding opportunities for people to experience solitude or primeval and unrestricted recreation, including the values associated with physical and mental inspiration and challenge.
- **Supplemental values** – complementary features of scientific, educational, scenic or historic values.

Environmental Consequences

Proposed Action
Wilderness values of untrammeled, naturalness, undeveloped, solitude or primitive and unconfined recreation, and as described below would be affected by the proposed installation of the Wildlife Water Development.

1- Untrammeled
A wildlife water development is a trammeling activity, one of the objectives for BLM wilderness management is to manage habitat for healthy, viable, and naturally distributed wildlife populations (BLM 2008). The proposed action will help support the distribution of desert bighorn sheep in wilderness.

2- Naturalness
The naturalness of the area would be slightly decreased by the installation of the wildlife water development. The proposed action may increase naturalness over time due to greater distribution of wildlife throughout the area. In accordance with Section 209(d) of LCCRDA (2004), the tanks and dams would be painted to blend in with the surrounding environment thus minimizing the visual impact to wilderness character. The concrete dams and the outside of the drinker would be surfaced with rock found at the site to integrate the structures into the surrounding area. The 2" polyethylene pipelines will be painted and/or buried if possible. Some sections will be covered with rocks to break up linear nature of the pipelines. Work crews would generate some human waste in the wilderness.

3-Undevloped
The wildlife water development would be considered a permanent installation however, LCCRDA (2004), section 209 (d) specifically allows for the construction of wildlife water developments in wilderness.

4- Opportunities for Solitude or Primitive and Unconfined Recreation
During the delivery of material and construction of the development, solitude and primitive recreation would be negatively impacted by the presence of motorized equipment, helicopter, and a large group comprised of volunteers, BLM, and NDOW personnel. This impact would be temporary and would only be for two days, one day for delivery of materials and one for construction.

No Action
Under the no action alternative this wildlife water development would not be built, therefore, no effects to the currnet state of wilderness character would occur. The current state of wilderness character is described above and in the affected environment.

Cumulative Impacts

The purpose of the cumulative impacts analysis for the proposed action is to evaluate the combined, incremental effects of human activity within the scope of the project. The BLM Ely Resource Management Plan and Final Environmental Impact Statement (2008) states that resource analysis will occur by watershed. CEQ regulations define scope to include connected actions, cumulative actions, and similar actions (40 CFR 1508.25). The proposed action is in the Coyote Spring Valley Hydrogeographic basin, which is within the Colorado River Basin region; therefore the scope of the cumulative analysis will be restricted to actions within the Coyote Spring Valley Hydrogeographic basin (See Figure 2). The Council on Environmental Quality formally defines cumulative impacts as follows:

> '...the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time' (40 CFR 1508.7).

According to the 1997 CEQ Handbook *Guidelines for Assessing and Documenting Cumulative Impacts*, the analysis can be focused on those issues and resource values identified during scoping that are of major importance. The relevant issues identified during scoping for the proposed action were the potential to spread noxious and non-native invasive weeds; impacts to wilderness character; hydrological impacts; and impacts to plants and wildlife during construction.

Past Actions

In the past 25+ years, there have been over 100 small game water developments and more than 76 big game water developments constructed throughout the Ely District. Within the Coyote Spring Valley Hydrogeoraphic basin, there have been 7 big game and 20 small game water developments constructed to date (See Figure 2). The big game developments have allowed for the reintroduction of desert bighorn sheep into the Delamar Mountains Wilderness Study Area, which was designated as wilderness in 2004, as well as supporting desert bighorn sheep management in the Desert National Wildlife Refuge.

Present Actions

The Coyote Spring Valley Hydrogeographic basin encompasses many land uses (See Figure…). Domestic livestock grazing occurs outside of the Desert National Wildlife Refuge. Coyote Springs Land Company LLC (CSLDC) is developing a 43,000 acre master planned community in proximity to the southern portion of Meadow Valley Wilderness (See Figure 2). One golf course recently opened with a 12,000 square foot community center currently under construction. The golf course has 11 water features. Major construction activities are underway for infrastructure that will support the development.

Reasonably Foreseeable Future Actions

The reasonably foreseeable future actions (RFFAs) within the project area include the following: lands sales and developments associated with Coyote Springs Land Company LLC (CSLDC); right of ways for pipeline, power line, and/or groundwater projects such as Southern Nevada Water Authority and the Lincoln County Water District (LCWD) water projects, and the Southwest Intertie Project (SWIP); road construction such as paving Kane Springs Road; Department of Defense activities such as retrieval of downed aircraft; wildland fire management activities; and additional wildlife water developments.

Noxious and Non-native Invasive Weeds

Weeds have the potential to increase in distribution and abundance for any RFFAs during the construction phase. The proposed action would disturb a very small area compared to these other potential projects. These RFFAs will also have the same BLM Ely District Weed Management Standard Operating Procedures associated with them to minimize the spread of weeds associated with those projects. Moreover, the design features described in the proposed action would minimize the potential to spread weeds, thereby contributing a negligible effect to the overall cumulative impact to the potential spread of noxious and non-native and invasive weeds within this hydrogeographic basin.

Wildlife (including threatened & endangered and special status species)
Wildlife may be affected negatively by displacement or disruption of normal behavioral patterns due to construction, project operations and maintenance, and site rehabilitation. In addition, some of these projects and actions could increase traffic, conflicts with humans, and competition for habitat niches. Some of these actions may also decrease forage quality, quantity, and composition. Overall, the proposed action would disturb a very small area separate from other RFFA project areas, construction would only take one day, and SOPs for the desert tortoise would negate any affects to individual tortoises; thereby no considerable increase would occur to the overall impact to wildlife within the Hydrogeographic basin. The project would benefit desert bighorn sheep, mule deer, and other animals that can utilize the water development by providing water in an area lacking in this resource.

Soils
Soils may be disturbed to different degrees dependent upon the RFFAs. Most projects attempt to minimize disturbance and to stabilize soils as quickly as possible post project implementation. Standard operating procedures specific to each RFFA and mitigation measures employed before, during, and after the implementation of the RFFA decrease the cumulative impacts to soil resources. Overall, the proposed action would disturb a very small area separate from other RFFA project areas, thereby not increasing the overall impact to soil resources.

Wilderness Character
By law, no buffer zones are created to protect wilderness from the influence of activities on land outside of wilderness boundaries. However, RFFAs such as the current and future golf course in the Coyote Springs development have the potential to impact movement of sheep because of the water sources contained on the golf courses (currently 11). Installation of the MV3 wildlife water development may help mitigate this potential problem. Transportation of materials and construction would take place on two separate days; therefore long-term impacts to wilderness character would not occur or notably add on to impacts stemming from RFFAs. In this proposed location the project would be unnoticeable in the area as a whole and would not be obvious to wilderness visitors in this out of the way location, thus having a negligible contribution to cumulative effects on wilderness character.

Past, Present, and Reasonably Foreseeable Actions Within the Coyote Spring Valley Hydrobasin

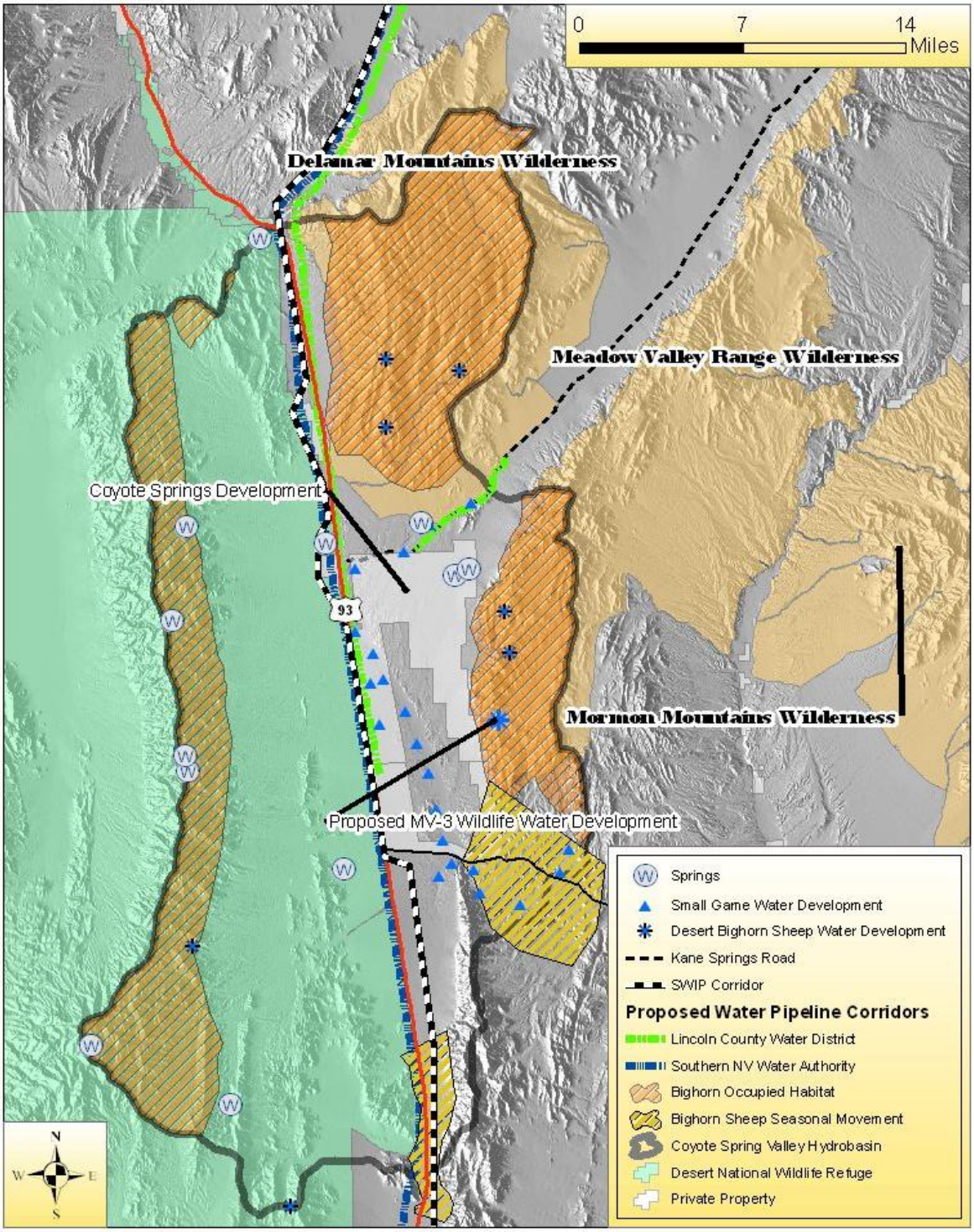


Figure 2. Past, Present, and Reasonably Foreseeable Actions within the Coyote Spring Valley Hydrogeographic basin.

Proposed Mitigating Measures

Appropriate mitigation measures have been included as part of the design features.

Consultation and Coordination

The BLM consulted and coordinated with the following individuals, Federal, state and local agencies, tribes and non-BLM persons during the development of this environmental assessment:

Internal District Review

Chris Linehan	Visual Resources Management, Recreation
Bonnie Million	Noxious and Invasive Weeds
Domenic Bolognani	Rangeland Management/Vegetation/Livestock Grazing
Alan Kunze	Soils, Air, Water Quality, Wetlands/Riparian, Floodplains
Joseph David	Environmental Coordination
Lynn Wulf	Cultural Resources
Elvis Wall	Native American Religious Concerns
Rick Baxter	Wildlife/T&E/Migratory Birds/Special Status Species
David Jacobson	Wilderness, ACEC
Brenda Linnell	Lands
Melanie Peterson	Hazardous Waste
John Longinetti	Engineering
Ben Noyes	Horse and Burro Specialist

Federal and State Officials and Agencies

Brad Hardenbrook	Nevada Division of Wildlife
Mike Scott	Nevada Division of Wildlife
Craig Stevenson	Nevada Division of Wildlife

References

BLM 2008a. Resource Management Plan/Final Environmental Impact Statement for the Ely District. U.S. Department of the Interior, Bureau of Land Management, Ely District Office, Ely, Nevada. August 2008.

BLM 2008b. Draft Wilderness Management Plan for Delamar Mountains, Meadow Valley Range, and Mormon Mountains Wilderness Areas. U.S. Department of the Interior, Bureau of Land Management, Ely District Office, Ely, Nevada. July 2008.

Sheley, R.,J. Petroff, M.. Borman, 1999. Introduction to Biology and Management of Noxious Rangeland Weeds, Corvallis, OR.

United States Fish and Wildlife Service. 1990. Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Mojave Population of the Desert Tortoise. Federal Register Volume 55, Number 63, April 2, 1990. http://ecos.fws.gov/docs/federal_register/fr1673.pdf

Appendices

Appendix 1: Request to Append an Action to the Programmatic Biological Opinion for the Ely Resource management plan, Lincoln, White Pine, and Portion of Nye Counties, Nevada. File No. 84320-2008-F-0078.

Informal Consultation Form

(Pages 1-3 to be completed by the BLM)

Date: 9-SEPT-2008

Service File No.: **Agency/Case Project No.:** NV-045-08-024

Project Name: Meadow Valley # 3 Wildlife Water Development
County/State: Lincoln County, Nevada
Jurisdictional Land Managers: Bureau of Land Management

Federal Agency
Name: Bureau of Land Management
Address: Caliente Field Office, P.O. Box 237
City/State/Zip: Ely, Nevada 89301
Contact/Title: Rick Baxter-Wildlife Biologist
Phone/Fax: P: 775-726-8127 F: 775-726-8111

Project Proponent
Name: Nevada Department of Wildlife
Address: Southern Region, Las Vegas, 4747 Vegas Drive
City/State/Zip: Las Vegas, NV 89108
Contact/Title: Craig Stevensen-Wildlife Biologist
Phone/Fax: P: 702-486-5127 F: 702-486-8811

Brief Project Description:
(exact location, size, prior site disturbance, starting date, and duration; attach photos of site if available).

The Nevada Department of Wildlife (NDOW) proposes to construct the Meadow Valley #3 (MV3) Wildlife Water Development in the southern portion of the Meadow Valley Range Wilderness area. The current site under consideration is within the Mormon Mesa-Ely ACEC two miles northeast of the intersection of the Clark County line and old Hwy 93 (See Attached Maps). The proposed water development would consist of the following; a solid "slick rock"

collection surface, a small check dam, two 2" polypipe lines to carry water to the tanks, four low profile 1,800 gallon tanks 28 inches tall by 8 feet wide and 16 feet long. The tanks would be placed side by side and leveled on a flat spot 17 feet by 32 feet (≈ .05 acres total) approximately 150 yards from the slick rock. The pipes would be covered with rocks and the drinker would be placed 15-50 feet away from the tanks. The drinker would be constructed of ¼" plate steel and sunk into the ground with cement and rocks placed around it. An escape ramp at a 35 deg slope will be installed in the drinker. This ramp will be constructed of metal and will have a textured surface to enable wildlife to escape. The Nevada Department of Wildlife proposes to sling load construction materials to the water development site by helicopter two weeks prior to construction and to fly workers to the site the day of construction. The project is proposed to take place between the months of January and May of 2009. Twenty five to forty individuals would be utilized and construction would take 6-8 hours to complete.

Habitat Description (including surveys conducted and results): The site is within the Mormon Mesa-Ely ACEC and is characterized as Mojave Mixed-Elevation Desert Scrub. Although the site is located in designated critical habitat, the micro-site or place where the tanks and drinker would be placed is sparsely vegetated and the slick rock area is steep and rocky. It does not appear to be optimal tortoise habitat (See attached photos), and the total disturbance should be ≤ 0.10 acres. The elevation of the proposed site is 3,473 feet above sea level.

Minimization Measures:

The following project specific minimization measures will be incorporated:

1) Preactivity surveys will be conducted by a qualified desert tortoise biologist prior to construction. These surveys should include one hundred percent coverage of the project area and belt transects at 100, 300, and 600 feet away for the zone-of-influence. If tortoise burrows are found the project footprint formal consultation must be initiated or the project location changed. No handling of tortoise is allowed.

2) Should a tortoise enter the site during construction, all activity will cease until the tortoise exits the site on its own accord.

3) During yearly cleaning of the guzzler, any animal parts or remains found will be identified by NDOW. Should any tortoise parts or remains be found, NDOW must notify the BLM and the Service.

4) For most projects an authorized desert tortoise biologist will be onsite during project activities within desert tortoise habitat. Biologists, monitors, or anyone responsible for conducting monitoring or desert tortoise field activities associated with the project will complete the Qualifications Form (found in Appendix D of the Ely RMP Programmatic BO (84320-2008-F-0078) and submit it to the Service for review and approval as appropriate. The Service should be allowed 30 days for the review and response.

Minimization measures specific to the Ely RMP Programmatic BO (84320-2008-F-0078) and informal consultation:

2.a. Prior to initiation of an activity within desert tortoise habitat, a desert tortoise awareness program shall be presented to all personnel who will be onsite, including but not limited to contractors, contractors' employees, supervisors, inspectors, and subcontractors. This program will contain information concerning the biology and distribution of the desert tortoise and other sensitive species, the legal status and occurrence in the project area; the definition of "take" and associated penalties; speed limits; the terms and conditions of this biological opinion including

speed limits; the means by which employees can help facilitate this process; responsibilities of workers, monitors, biologists, etc.; and reporting procedures to be implemented in case the desert tortoise encounters or non-compliance with this biological opinion.
2.e. A litter-control program shall be implemented to minimize predation on tortoises by ravens drawn to the project site. This program will include the use of covered raven-proof trash receptacles, removal of trash from project areas to the trash receptacles following the close of each work day, and the proper disposal of trash in a designated solid waste disposal facility. Appropriate precautions must be taken to prevent litter from blowing out along the road when trash is removed from the site. The litter-control program will apply to all actions. A litter-control program will be implemented by the responsible federal agency or their contractor, to minimize predation on tortoises by ravens and other predators drawn to the project site.
3.e. Prior to starting operations each day on any project that is not totally enclosed by tortoise-proof fencing and cattleguards, the project proponent shall be responsible for conducting a desert tortoise inspection by authorized desert tortoise biologists using techniques approve by the Service and BLM. The inspection will determine if any desert tortoises are present in the following locations:

- Around and under all equipment
- In and around all disturbed areas to include stockpiles and reject materials areas;
- In and around all routes of ingress and egress; and
- In and around all other areas where the operation might expand to during that day.

If a tortoise is discovered during this inspection or later in the day, the operator will immediately cease all operations in the immediate vicinity of the tortoise and will immediately notify BLM authorized officer.
Additional Comments:

Listed Species: Mojave population of Desert Tortoise (*Gopherus agassizii*)

Determination: ____ No effect (for informational purposes only; no Service response required)
__X_ Not likely to adversely affect
If determination is likely to adversely affect, initiate formal consultation.
Critical Habitat Affected? _X_ Yes ___ No
If yes, determination: ___X__not likely to adversely modify
If determination is likely to adversely modify, initiate formal consultation.

Signature: _____ _____
(Agency Representative) (Date)

Title: ____Field Manager-BLM, Caliente Field Office_____

U.S. FISH AND WILDLIFE SERVICE

Endangered Species Act - Section 7
Informal Consultation Form

Project Name: Meadow Valley # 3 Wildlife Water development, Lincoln County, Nevada

(This page to be completed by the U.S. Fish and Wildlife Service)

Service File No.: 84320-2009-I-0006 **Agency/Case Project No.:** NV-045-2008-024

Service Response:

Based on the information provided, the agency has determined that the action, as proposed and analyzed, *is not likely to adversely affect* the desert tortoise. The U.S. Fish and Wildlife Service:

__X__ concurs _____ does not concur (see suggested alternatives) with this determination.

Justification for Response:

This project footprint is less than 0.1 acres and the guzzler will installed in one day. Materials will be flown into the wilderness area. Project minimization measures include surveying for tortoises prior to guzzlers installation and halting all project activities should a tortoise appear on site during construction. The escape ramp in the drinker, should allow any tortoise that enters the drinker to exit the drinker. The guzzler is located in an area with sparse vegetation. These minimization measures will ensure that impacts to the tortoise and its designated critical habitat from the project are insignificant.

Conclusion:

This response constitutes informal consultation under regulations promulgated in 50 CFR § 402.14, which establish procedures governing interagency consultation under section 7 of the Endangered Species Act of 1973, as amended. This informal consultation does not authorize any take of desert tortoise.

Signature: _____ 10/28/08

Robert D. Williams, Field Supervisor
Nevada Fish and Wildlife Office

Date

Appendix 2: Risk Assessment for Noxious and Non-native Invasive Weeds

RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS

Meadow Valley #3 Wildlife Watering Development
Lincoln County, Nevada

On August 6th, 2008 a Noxious & Invasive Weed Risk Assessment was completed for the Meadow Valley #3 wildlife watering development project in the Meadow Valley Wilderness. The site proposed for Meadow Valley #3 is approximately three miles south of TriCanyon and a mile and a half north of the Clark County-Lincoln County Line. The Nevada Department of Wildlife would construct the project with funding and labor primarily provided by the Fraternity of the Desert Bighorn. Construction access would be by helicopter on two or three days, within a three week period. Staging of equipment, supplies and crew would occur outside of Wilderness on private property owned by Coyote Springs Development. Two small check dams would be constructed to slow runoff water flow in a slickrock drainage. Johnson water screens would filter out debris and the water would be piped approximately 350 feet to four 1,800 gallon tanks. If the area where the tanks sit needs to be leveled out it would be done using hand tools.

The water would be cross-flowed to a ramped drinker of the same height as the tanks (28" to 30") for use by wildlife. The concrete dams will be surfaced with rock found at the site to integrate the dams into the surrounding area. The 2" polyethylene pipelines will be painted and/or buried if possible. Some sections will be covered with rocks to break up visually distracting lines as much as possible. The tanks will also be painted to conform to the colors of the site. No construction materials or spare parts will be left at the site. Surface disturbance will be limited to the absolute minimum necessary. Once the project is constructed, current regulations dictate that maintenance and inspection activities will be by foot.

There are currently no documented noxious weed infestations in the project area. The closest documented infestation is salt cedar (*Tamarix spp.*) which occurs over 10 miles away in Meadow Valley Wash. Red brome (*Bromus rubens*) occurs in small quantities. While not officially inventoried the following weeds probably occur around the project area:, Russian thistle (*Salsola kali*), and tumble mustard (*Sisymbrium altissimum*). The project area was inventoried for noxious weeds in November 2008.

Factor 1 assesses the likelihood of noxious/invasive weed species spreading to the project area.

None (0)	Noxious/invasive weed species are not located within or adjacent to the project area. Project activity is not likely to result in the establishment of noxious/invasive weed species in the project area.
Low (1-3)	Noxious/invasive weed species are present in the areas adjacent to but not within the project area. Project activities can be implemented and prevent the spread of noxious/invasive weeds into the project area.
Moderate (4-7)	Noxious/invasive weed species located immediately adjacent to or within the project area. Project activities are likely to result in some areas becoming infested with noxious/invasive weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of noxious/invasive weeds within the project area.
High (8-10)	Heavy infestations of noxious/invasive weeds are located within or immediately adjacent to the project area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of noxious/invasive weeds on disturbed sites throughout much of the project area.

For this project, the factor rates as Low (2) at the present time. With no major ground disturbance associated with this project and the use of hand crews and no vehicles, it is possible for the project activities to occur without spreading noxious or non-native invasive weeds to the project area.

Factor 2 assesses the consequences of noxious/invasive weed establishment in the project area.

Low to Nonexistent (1-3)	None. No cumulative effects expected.
Moderate (4-7)	Possible adverse effects on site and possible expansion of infestation within the project area. Cumulative effects on native plant communities are likely but limited.
High (8-10)	Obvious adverse effects within the project area and probable expansion of noxious/invasive weed infestations to areas outside the project area. Adverse cumulative effects on native plant communities are probable.

This project rates as High (10) at the present time. If new weed infestations establish within the project area this could have an adverse impact those native plant communities since the areas are currently considered to be weed-free. Any increase of red brome could alter the fire regime in the area. Also, since this project occurs within the boundaries of a Wilderness any new infestation would be difficult to detect and treat.

The Risk Rating is obtained by multiplying Factor 1 by Factor 2.

None (0)	Proceed as planned.
Low (1-10)	Proceed as planned. Initiate control treatment on noxious/invasive weed populations that get established in the area.
Moderate (11-49)	Develop preventative management measures for the proposed project to reduce the risk of introduction of spread of noxious/invasive weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor the area for at least 3 consecutive years and provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations.
High (50-100)	Project must be modified to reduce risk level through preventative management measures, including seeding with desirable species to occupy disturbed site and controlling existing infestations of noxious/invasive weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations.

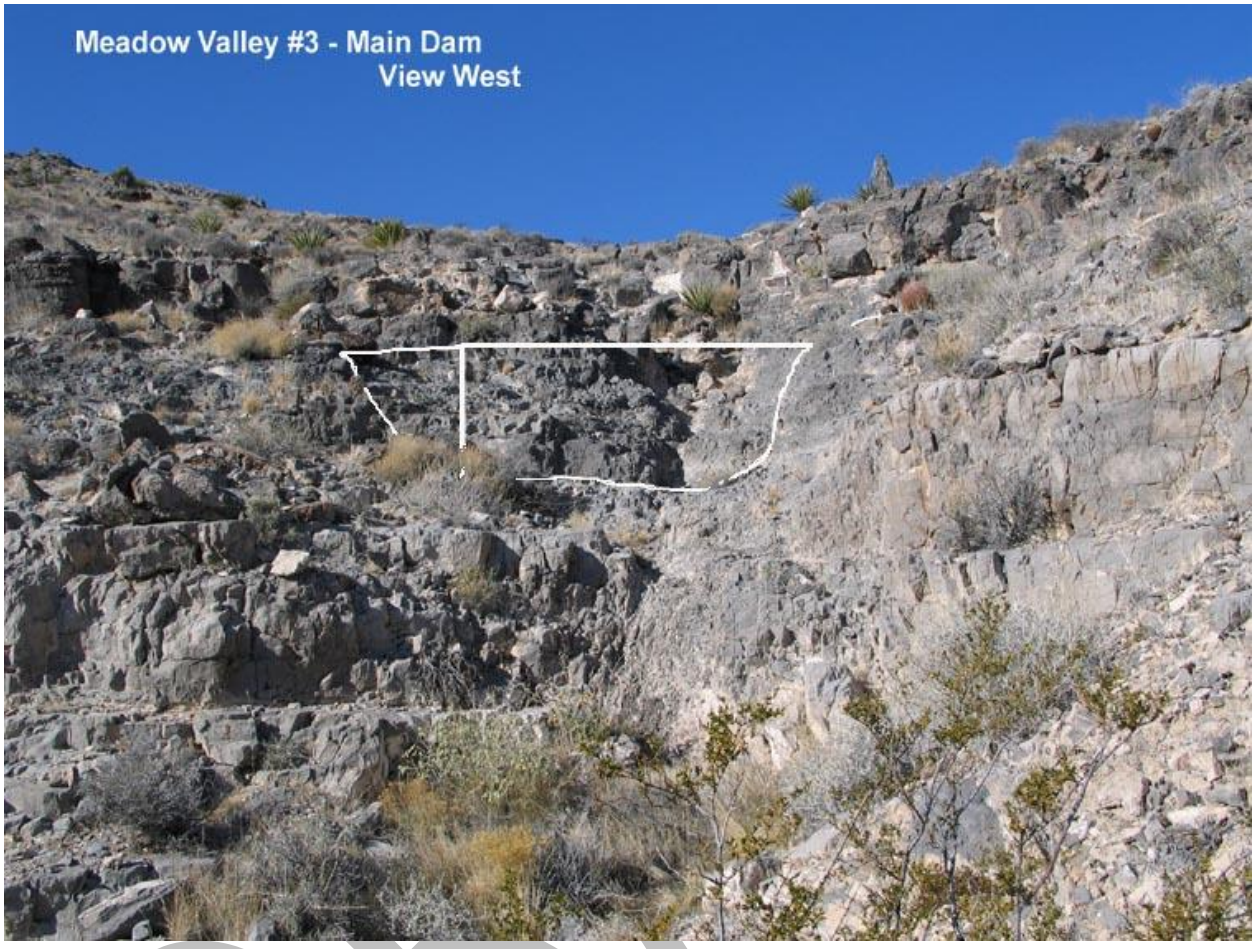
For this project, the Risk Rating is Moderate (20). This indicates that the project can proceed as planned as long as the following measures are followed:

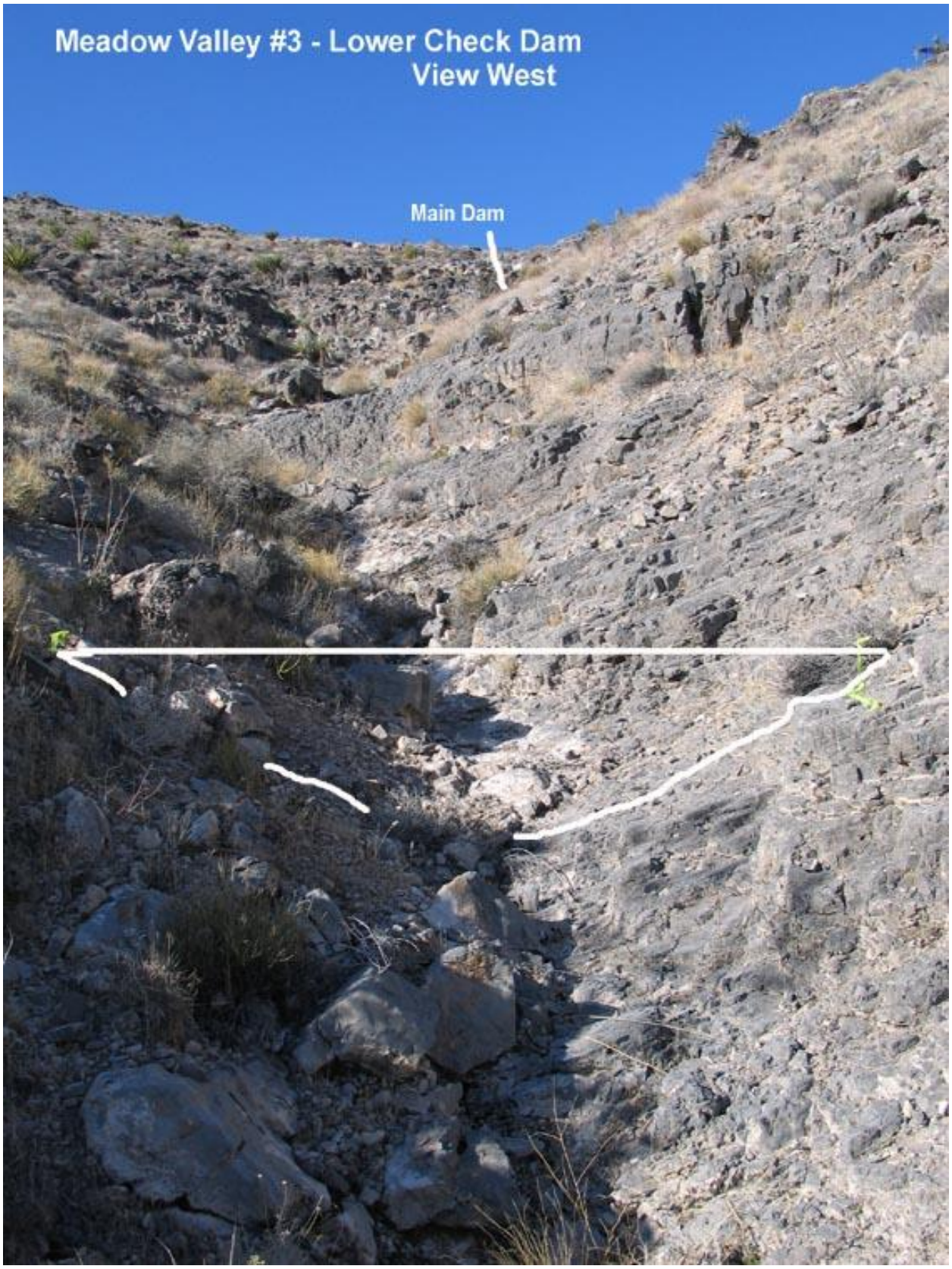
- Prior to entering public lands, the contractor, operator, or permit holder will provide information and training regarding noxious weed management and identification to all personnel who will be affiliated with the implementation and maintenance phases of the project. The importance of preventing the spread of weeds to uninfested areas and importance of controlling existing populations of weeds will be explained.
- To eliminate the transport of vehicle-borne weed seeds, roots, or rhizomes all vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules. All such vehicles and equipment will be cleaned with power or high pressure equipment prior to entering or leaving the work site or project area. Cleaning efforts will concentrate on tracks, feet and tires, and on the undercarriage. Special emphasis will be applied to axels, frames, cross members, motor mounts, on and underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out and refuse will be disposed of in waste receptacles. Cleaning sites will be recorded using global positioning systems or other mutually acceptable equipment and provided to the District Weed Coordinator or designated contact person.
- Removal and disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)

Reviewed by: _____ 8/6/2008

Bonnie M. Million Date
Ely District Noxious & Invasive Weeds Coordinator

Appendix 3: Photos of Proposed Site




Meadow Valley #3 - Lower Check Dam
View West
Main Dam